PHENIX

Technical Support 2007

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WEEKLY PLANNING

4/12/2007

Don Lynch

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Schedule

Next Maintenance Day	4/25/07
Remove HBD West	4/25/07?
MuTr FEE upgrade prototype	5/9/07
End of Run Party	6/29/07
Start Shutdown 2007	7/2/07
Remove HBD East	7/2/07
[this space available]	*x/xx/xx*

Last Maintenance Day: Apr. 11

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How'd we do ?

- HBD gas lines bypass quality check, Flash lamp tests, resister changes
- muID gas checks and fitting tightening
- BBC mainframe swap-out
- AC maintenance North & South
- FPGA test box removal
- Lighting for gas gauge web cameras
- TEC LV problems
- Other

Next 2 Maintenance Days: Apr. 25, May 9

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Remove HBD West ?

Get requests in early, especially if work permit required

Procedures Review

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Current Tally:

- 122 controlled PHENIX procedures total (elliminated 6 more)
- 72 de-activated review complete
- 50 active some of these will be combined further reducing the # of active procedures.
- 12 C-A OPM's requiring PHENIX input (11 current, 1 de-activated)

Next Phase:

Carefully review 50 remaining active procedures, determine "cognizance", provide guidance on standardized format and control, solicit update/revision/consolidation/deactivation from cognizant person or group, implement improved configuration control system.

JTA Review

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Fill out list and return it to me by tomorrow. Electronic or paper is OK

Purpose:

1. Standardize/Simplify JTA's
2. Assure that required training is monitored
3. Assure that suggested training is tracked.
4. Remove unnecessary requirements
5. Get proper credit for equivalent training

Goal is to make it easier.

RPC Assembly "Factory" at BNL

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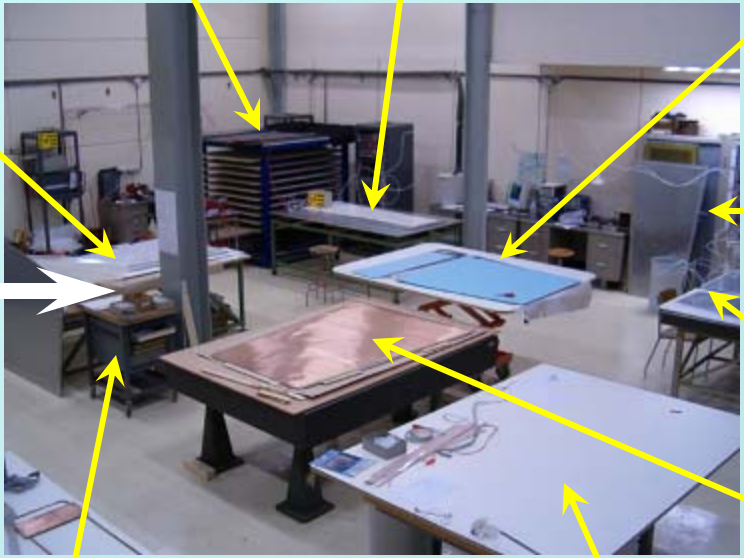
Still waiting for C-A "beneficial occupancy" date. Then we can start building the factory.



Cosmic ray test stand

Table for preparing cosmic ray test

Movable cart

A small table

Gas system

Tables for leak test

Assembly table

Rolling cart with a lot of drawers to hold tools and screws

Table holding tools

Two more tables not in the picture, one for assembly, one for holding tools and material

RPC Assembly "Factory" at BNL

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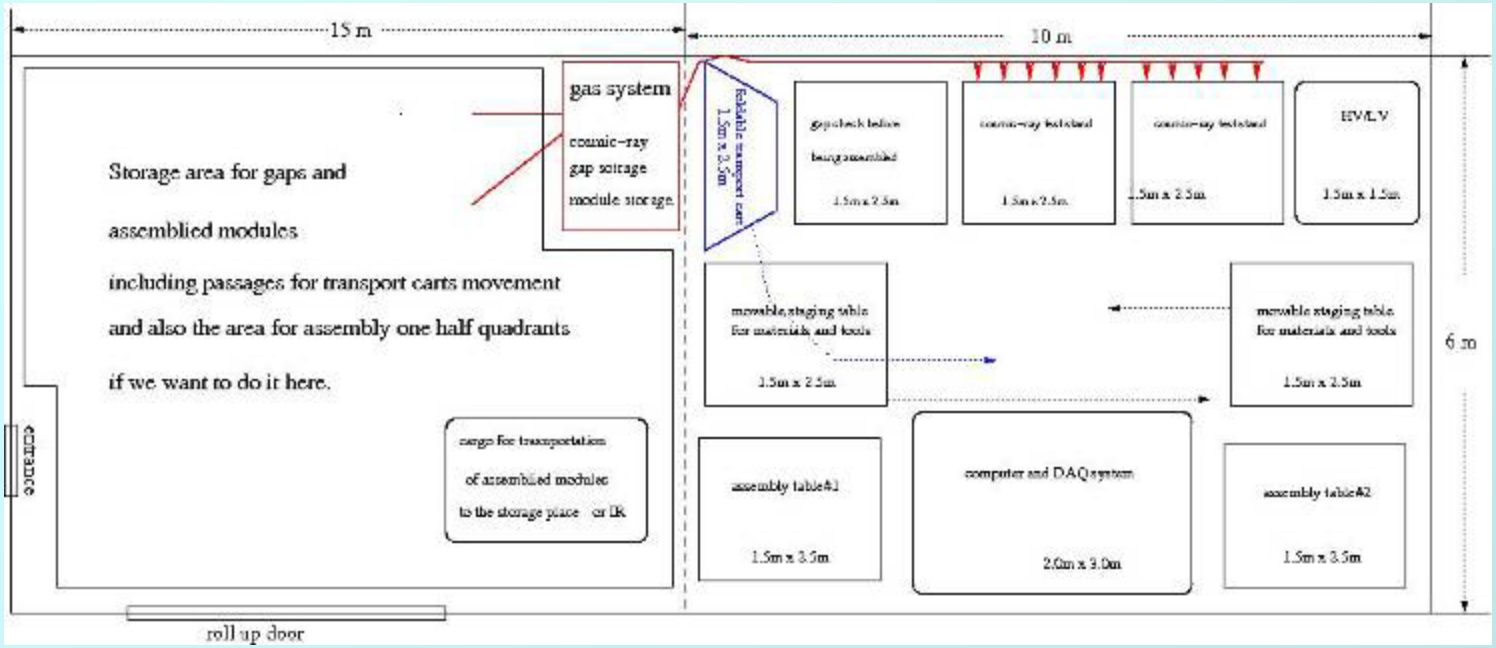
- foldable gap transportation carts
  - Can fold over to put down or pick-up the gap vertically.
  - And also can be raised high enough to be above all table so that it can snake around to transport gap to/from one assembly table when the other is still in process

- cosmic-ray test stands
  - Multi-layers confirmation for multiple chamber test simultaneously.

- cargo for assembled module transportation to IR.
  - Transport the module vertically .
  - Can be something simpler for the transportation between storage area and cosmic-ray test stands.

Proposed Layout for BNL factory



- The gap will be transported from the storage area to the gap-check-table using the foldable transportation carts for leak, spacer pop and dark current check before being assembled.
- Move the staging table to the proper area to leave space for the carts to place the gap on the assembly tables.
- Move the staging table back in place and start assembly
- Start checking another gap at the same time in the gap-check-table to prepare for the next assembly
- After one module is finished, transport the module to the test stands by hands. Plug in the gas and start testing.
- after finished the testing, transport the modules to the storage place, hook-up the gas.

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Proposed List of Items Needed

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- Tent:
  - the existing tent used for PC assembly can cover half of the room.
- two staging tables of the size 1.5m x 2.5m:
  - Regular table that will be used for temporally placing material, e.g. readout plane before being assembled. It should be movable so that it can easily vacant the space beside the assembly table for the transport card to place or take out the gaps.
- Two assembly table of the size 1.5m x 2.5m:
  - Feedback from Byungsik Hong: regular metric table (??) is used for CMS assembly.
  - We can also combined the two tables later for half quadrants assembly (is 2.5m x 3m large enough for this purpose?)
- one gap-check table:
  - Same flatness requirement as the assembly table.
  - Used for gap gas leak, spacer pop and dark current check before the assembly.
- Two multi-layer cosmic-ray test stands (CIAE):
  - to be able to test the largest modules, i.e. 2.0m x 1.3m (??? Please check).
- HV/LV system (UIUC: Ruizhe Young) :
  - Including racks

Proposed List of Items Needed (cont'd)

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- Gas system (UIUC: D. Northacker):
  - Gas pad.
  - should be able to handle the following at the same time (it can be 3 different systems if necessary):
    - Provide gas for cosmic-ray test.
    - Provide gas for flushing gas gap during their storage time
    - Provide gas for flushing assembled modules during their storage time.
- foldable transport cards:
  - For gap transportation among gap storage place, gap-check table and assembly table.
  - similar design as in CMS (see previous page)
- Module transportation cargo:
  - For module transportation between the factory to the IR and between cosmic-ray test stands to the storage area.
- Storage for gaps and assembled modules:
  - Storage frame for modules and gaps. Expect the design is different for gaps and module storage
  - Need leave space for assembly one half quadrants (2x5m^2) if combining two assembly table is not large enough.
- Computer and DAQ system (UIUC: Ruizhe Young with Martin) :
  - PDAQ is one choice. Have not problem to handle hundreds of channels.

Shutdowns 2007-2012

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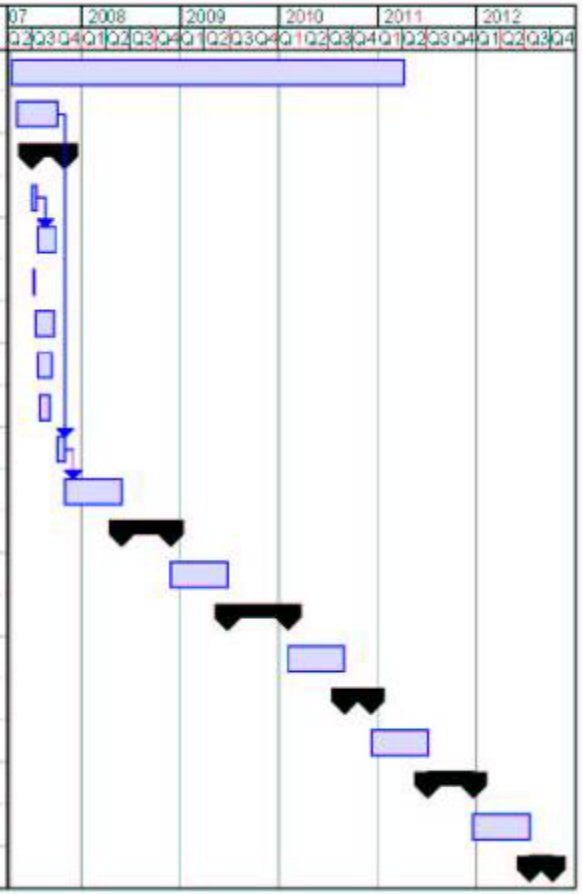
ID	Task Name	Duration	Start	Finish	Predecessors
1	RPC Factory	208 wks	Mon 4/16/07	Fri 4/8/11	
2	HBD Remove/Repair	21 wks	Wed 5/9/07	Tue 10/2/07	
3	**2007 Shutdown**	**88 days**	**Mon 7/2/07**	**Wed 10/31/07**	
4	Shutdown Prep (wall open, EC out, etc.)	3 wks	Mon 7/2/07	Fri 7/20/07	
5	Existing Detector Maint./Repair/Upgrade TBD	10 wks	Mon 7/23/07	Fri 9/28/07	4
6	DC Repair	1 wk	Mon 7/9/07	Fri 7/13/07	
7	MPC repair/upgrades	10 wks	Mon 7/16/07	Fri 9/21/07	
8	MuTr FEE Upgrade 1 octant 1,2 S	8 wks	Mon 7/23/07	Fri 9/14/07	
9	Infrastructure upgrades Crane/Ladder	5 wks	Wed 8/1/07	Tue 9/4/07	
10	EC roll in and Run Prep	4.2 wks	Wed 10/3/07	Wed 10/31/07	2
11	Run 8	30 wks	Thu 11/1/07	Wed 5/28/08	10
12	**2008 Shutdown**	**130 days**	**Thu 5/29/08**	**Wed 11/26/08**	
23	Run 9	30 wks	Thu 11/27/08	Wed 6/24/09	19,22
24	**2009 Shutdown**	**160 days**	**Thu 6/25/09**	**Wed 2/3/10**	
45	Run 10	30 wks	Thu 2/4/10	Wed 9/1/10	44
46	**2010 Shutdown**	**70 days**	**Thu 9/2/10**	**Wed 12/8/10**	
53	Run 11	30 wks	Thu 12/9/10	Wed 7/6/11	52
54	**2011 Shutdown**	**120 days**	**Thu 7/7/11**	**Wed 12/21/11**	
62	Run 12	30 wks	Thu 12/22/11	Wed 7/18/12	61
63	**2012 Shutdown**	**60 days**	**Thu 7/19/12**	**Wed 10/10/12**	



2007: HBD Repairs, DC, Repairs, MuTr FEE upgrade 1 octant 1,2 South, Crane, Ladder
2008: MuTr FEE all octants South, RPC3 South, LL1 South
2009: Beampipe, remove HBD & RXNP, RPC2 N&S, RPC3 N, Cu absorbers, VTX, DC West
2010: RPC1 N&S, LL1 North
2011: NCC N, FVTX,
2012: NCC S, Contingencies

Long Range Planning

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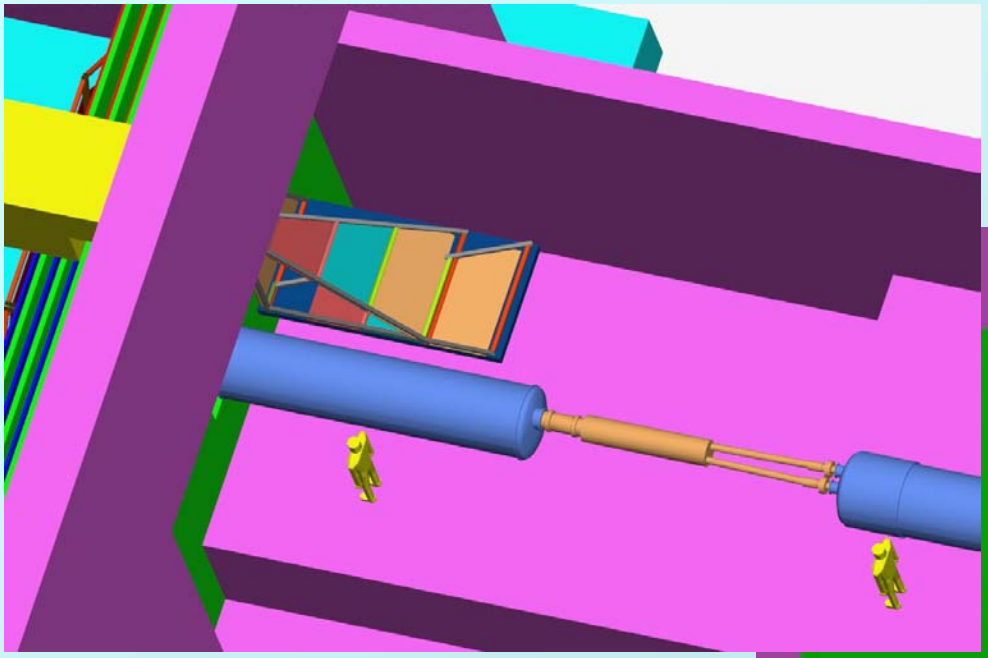
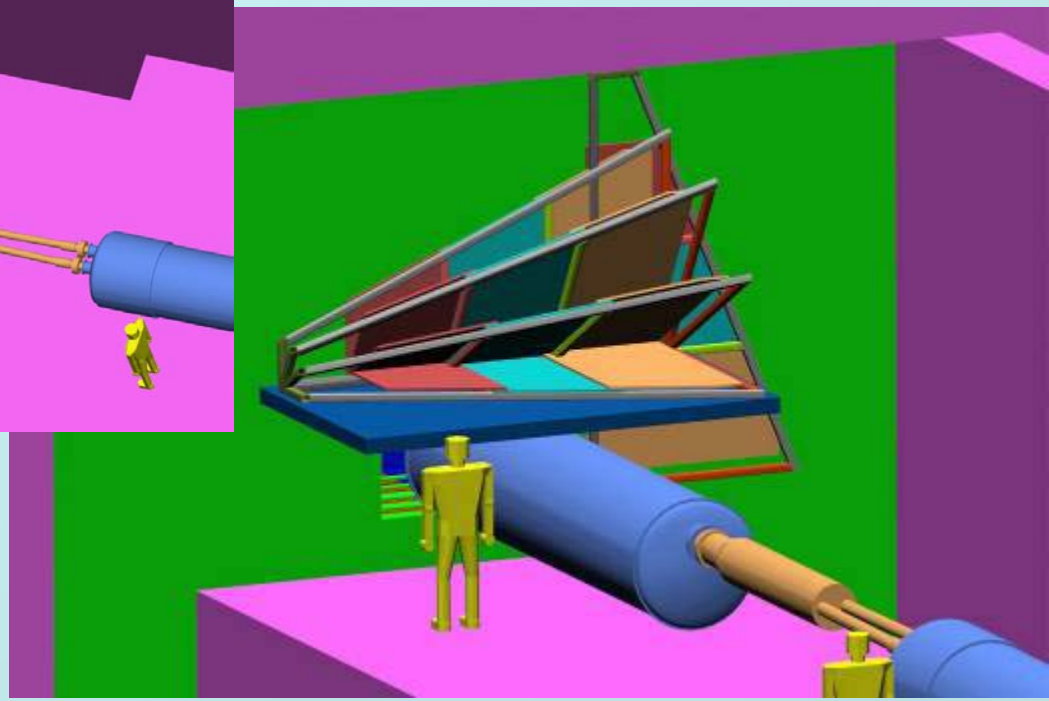
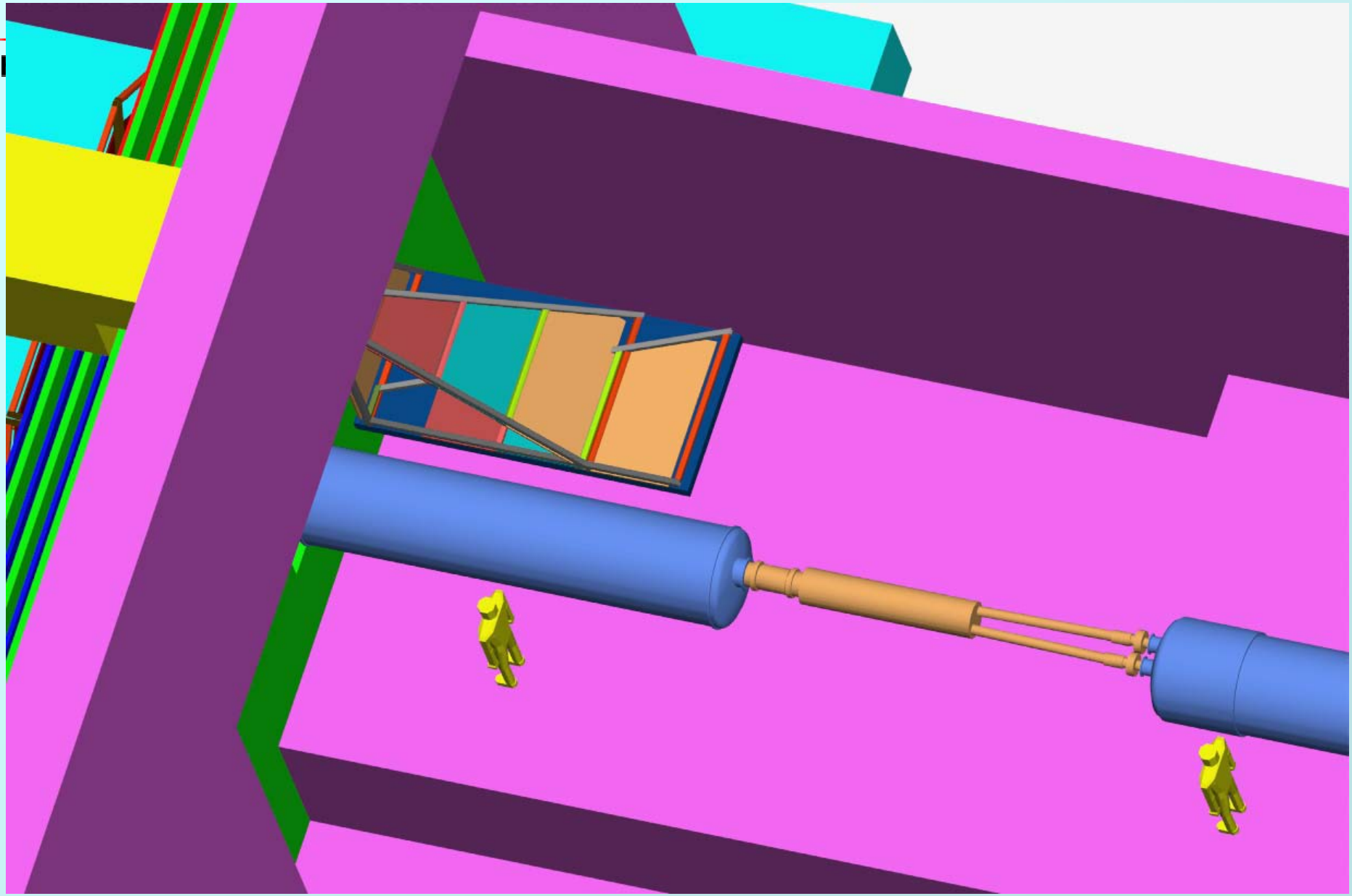
Bi weekly integration meeting re-established to plan next 5 years or so. Guidelines adopted. Plan to meet with RPC engineers in April.







Close to a plan view showing the table next to the magnet

Where To Find PHENIX Technical Info

Links for the weekly planning meeting slides, long term planning, pictures, videos and other technical info can be found on the web site:

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm